

ABSTRACT OF THE DISCLOSURE

In a semiconductor flash memory required to have high reliability, injection and extraction of electrons must be performed through an oxide film obtained by directly oxidizing a silicon substrate. Accordingly, the voltage to be used is a large voltage ranging from positive to negative one. In contrast, by storing charges in a plurality of dispersed regions, high reliability is achieved. Based on the high reliability, transfer of electrons is permitted through not only the oxide film obtained by directly thermally oxidizing a high reliability silicon substrate but also another oxide film deposited by CVD, or the like. In consequence, a device is controlled by electric potentials of the same polarity upon writing of data and upon erasing of data.